REMARKS

Claims 1-29 remain in this application. No claim amendments are made herein.

Claims 26-29 were rejected under 35 U.S.C. 103(a) as being unpatentable over Sugar et al. (US 6,714,605, hereinafter "Sugar") in view of McFarland et al. (US 2003/0107512 A1, hereinafter "McFarland"). The action cited each of the required claim elements and cited operations disclosed by Sugar that purportedly show the required claim elements. The action concedes that "Sugar fails to teach if a radar signal is present inhibiting transmission of outgoing communication signals from a radio transceiver" but states that this element is taught by the analogous art of McFarland.

The applicant disagrees that Sugar is relevant art to the claimed invention and also disagrees that Sugar and McFarland can properly be combined to show the claimed elements of the present claims.

Specifically, claim 26 is directed to a method in a radio transceiver while Sugar is directed to a system and method for real-time spectrum analysis in a communication device. Claim 26, by being directed to a method in a transceiver device, is concerned about not transmitting in the radar frequency bands when a radar is present. Related art areas, therefore, include wireless radio especially those that support WLAN operations. The claimed method is specifically directed to a simple approach for detecting a radar to operate accordingly. Sugar has nothing in common with such operations and is not relevant art. The applicant does concede that McFarland is relevant.

More specifically, Sugar shows a radio transceiver and, external to the radio transceiver, a spectrum analysis engine (SAGE) 10 that communicates with the radio transceiver through a radio interface (FIG. 1, col. 3, lines 2-23). Thus, while the claimed invention is for a method that merely detects the presence of a radar in a radio transceiver to reduce interference, Sugar is directed to providing spectrum analysis by SAGE 10 and identifying a large number of signal characteristics (col. 9, lines 15-32). Thus, while Sugar can provide an analysis of a signal, Sugar does not specifically include logic for identifying a radar signal to inhibit transmission if a radar signal is present. Providing spectrum analysis from which one can quantify signal characteristics

is different from analyzing a signal specifically for radar signal characteristics and inhibiting transmissions when such signal characteristics are present.

Even though the applicant believes that Sugar is not relevant art, the applicant also would like to point out that Sugar does not teach all that it is given credit for teaching. For example, the official action stated:

> *7. counting a number of most and second most common pulse intervals and determining whether a radar signal is present (col.12, lines 10-67, co1.13, lines 1-67, co1.14, lines 1-35, col.21, lines 45-60) [the sage 10 is used to classify and identify signals in a frequency band for radar systems] (col.3, lines 35-45, col.7, lines 5-67, col.8, lines 1-67, col.9, lines 67).*

A carefully review of cols. 12 and 13, shows that Sugar does not teach "*counting a number of most and second most common pulse intervals and determining whether a radar signal is present*". Sugar does teach counting peaks and generally determining signal characteristics (parameters), but Sugar does not teach the device applying logic to determine that the signal is a specific radar signal. For example, while Sugar teaches counting peaks, etc., Sugar does not teach determining first and second most common pulse interval values and then, based on this determination, further determining whether a radar signal is present.

Claims 1-10 were rejected under 35 U.S.C. 103(a) as being unpatentable over McGill et al. (US 5,017,921, hereinafter "McGill") in view of Sugar. The applicant continues to urge that Sugar is not relevant art and thus believes this rejection also is overcome. Additionally, the applicant notes that McGill is directed to a radar system, not a transceiver system for communicating with remote devices. While McGill does teach generating radar signals, McGill does not teach communicating and inhibiting communications when a radar is detected. Thus, the applicant believes that McGill is not relevant art and further more that McGill is an ineffective reference for teaching the claimed invention. McGill does teach a transmitter for transmitting radar pulses and a receiver for detecting echoes of the pulses (Abstract), but that is different from a communication transceiver.

As the spectrum analyzer of Sugar produces data but does not specifically search for radar signals having radar signal characteristics and does not include specific logic for inhibiting transmissions from the transceiver if a radar signal is present and as McGill is not a communication transceiver that produces communication signals as long as a radar is not detected, the applicant believes that the rejection of claims 1-10 with the combination of McGill and Sugar is overcome.

Claims 11-25 were rejected under 35 U.S.C. 103(a) as being unpatentable over McGill in view of Sugar and further in view of McFarland. As discussed above, the applicant believes that McGill and Sugar are ineffective and not relevant. While McFarland is relevant art, McFarland does not provide teachings for the elements of the claims that McGill and Sugar fail to actually teach. As argued above, Sugar is directed to a spectrum analyzer and does not include logic to specifically detect a radar. Granted, it can identify signal characteristics to allow a person to determine a radar is present, but Sugar does not actually make such a determination.

McFarland does state (end of para. [0025]:

> *To properly identify the received non-WLAN signal as radar, the event is analyzed with respect to periodicity, pulse characteristics, burst characteristics, and other similar parameters in a pattern-matching type of process to determine whether the event is a radar signal or not. Different types of radar systems and sources possess different pulse and burst characteristics. The system could be configured to classify any type of periodic event as a radar signal, or it could be configured to identify, to a certain degree of specificity, the identity of the radar source using look-up tables or profile data provided by system operators.*

Thus, McFarland does teach identifying a radar signal (and then finding a new channel to communicate on). McFarland teaches evaluating for physical errors [0027] and when the errors hit a threshold amount, performing radar detection analysis. McFarland teaches a Fast Fourier Transform Engine [0032], a Discrete Fourier Transform [0035], and a time domain analysis [0036] to, e.g., look for well known radar signal pulse repetition patterns [0045] to determine whether a radar is present. While McFarland generally teaches determining a radar presence, McFarland does not teach the specific method that claims 1 and 11 require. The applicant is

addressing claim 1 also because the applicant believes that McFarland was a better reference than McGill or Sugar as discussed above. Claim 1 requires:

radar detection circuit coupled to receive the digital low frequency signal, wherein the radar detection circuit:

detects incoming pulses and produces pulse data to a FIFO;

generates a table of pulse data for a series of pulses;

evaluates the pulse data within the table to remove pulse data for pulses that do not satisfy specified radar pulse characteristics;

groups a plurality of pulse data within the table into groups of a specified size;

performs radar detection processing

One aspect of the claimed invention is that the radar detection is simple to provide reliable radar identification without requiring complicated circuitry such as the Fourier analysis engines taught by McFarland. Thus, the specific steps of grouping identified pulses based on pulse size and then evaluating the groups to determine a radar presence are not taught by McFarland. The steps, for example, of removing pulses that have pulse widths that are too narrow or too wide is not taught in the cited passages of McFarland.

McFarland also does not teach measuring rise times and fall times relative to first and second thresholds as a part of identifying radar pulses (claim 7).

With respect to claim 11, the specific structure of the radar detection circuit is claims and includes the multiplication circuitry, the moving average filter, the first conversion block, the threshold comparison state machine. The action conceded McGill did not teach these features. The action states, however, that Sugar teaches the required processing to identify a radar signal. As discussed, however, Sugar only determines signal characteristics for any type of signal and does not have any specific circuitry used to specifically identify a radar and thus does not have any such capability to determine a radar has been identified. The applicant specifically notes that McFarland does not teach this required structure. McGill and Sugar, which are not believed to be relevant references, also do not teach this structure within a radio transceiver to specifically identify radar pulses. That Sugar teaches using a spectrum analyzer to identify peaks is not the equivalent of the required elements that may perform some similar functionality.

CONCLUSION

For the above reasons, the foregoing amendment places the Application in condition for allowance. Therefore, it is respectfully requested the present claims be reconsidered and that the rejection of the claims be withdrawn and full allowance granted. Should the Examiner have any further comments or suggestions, please contact James Harrison at (214) 902-8100. If the Examiner does not find the arguments persuasive, the applicant requests a telephone conference to help expedite the prosecution of the case so that he can better understand the examiner's position.

Respectfully submitted,
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